

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

Duplicate

(12) UK Patent Application (19) GB (11) 2 078 504 A

SCIENCE REFERENCE LIBRARY

- (21) Application No 8118709
(22) Date of filing 18 Jun 1981
(30) Priority data
(31) 354842
(32) 26 Jun 1980
(33) Canada (CA)
(43) Application published
13 Jan 1982
(51) INT CL³
A47C 17/04
(52) Domestic classification
A4L 104 BMB
(56) Documents cited
GB 1448692
GB 877320
GB 758289
GB 635119
GB 545746
GB 348684
(58) Field of search
A4J
(71) Applicants
Stan W. Atimichuk,
88 14th Street, Toronto,
Ontario, Canada M8V 3J2
(72) Inventor
Stan W. Atimichuk

- (74) Agents
Raworth, Moss & Cook,
36 Sydenham Road,
Croydon,
Surrey CR0 2EF

(54) Folding bed chair

(57) A folding chair that can be easily converted into a bed comprises a frame 10, 12, with three interconnected movable cushion assemblies positioned therein and removably attached to the frame and to a movable support member 31. In the chair mode, support member 31 is located between arms 10, cushion assemblies 18, 19 form the chair back, and wedges 37 or cushion assembly 26 rest on members 13 and engage stops 38.

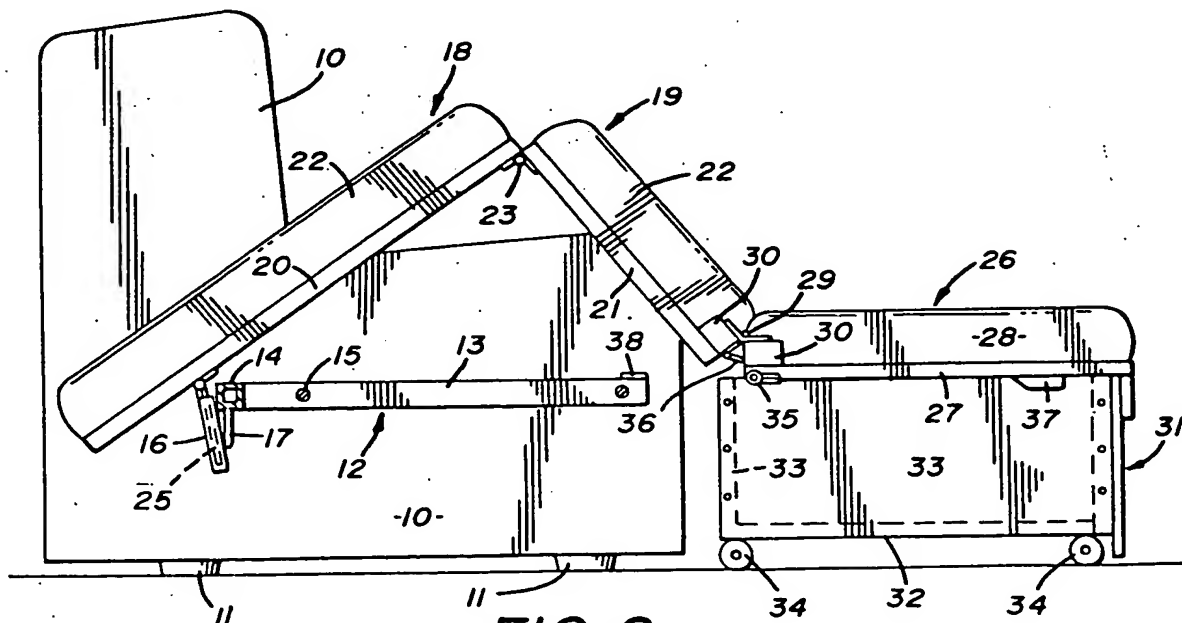
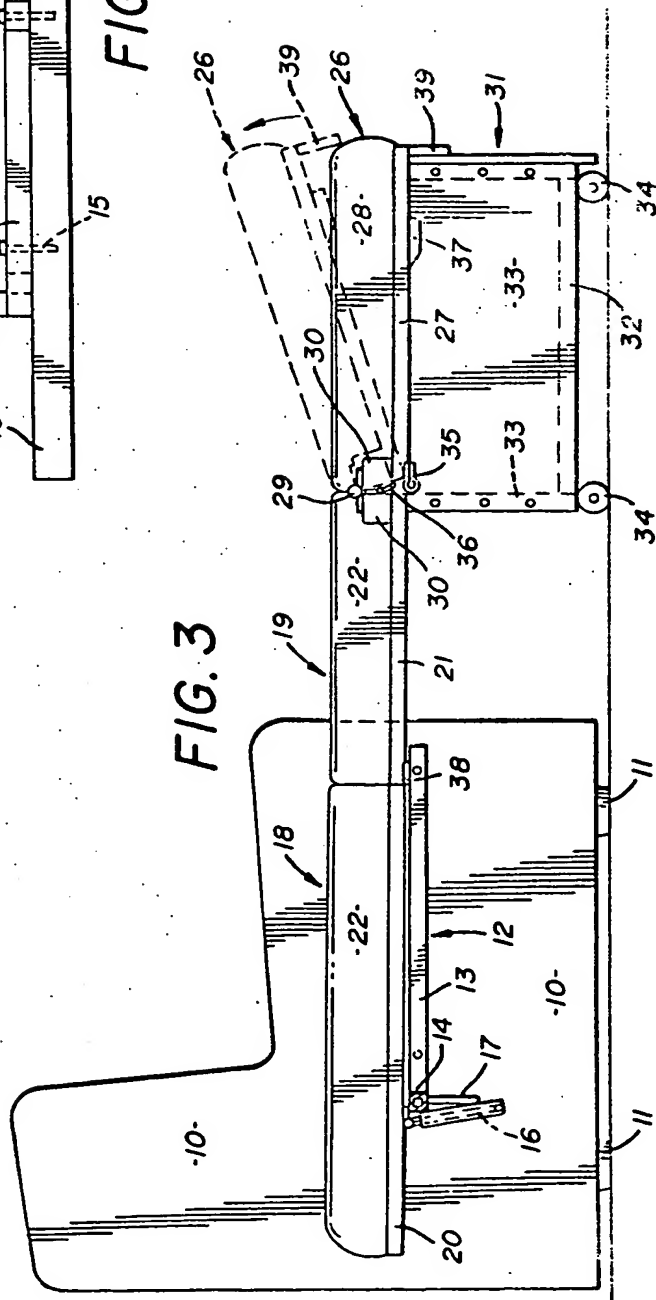
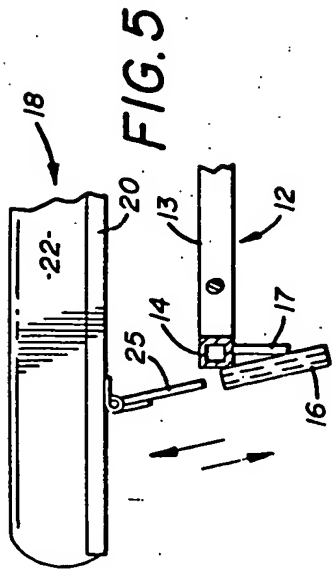
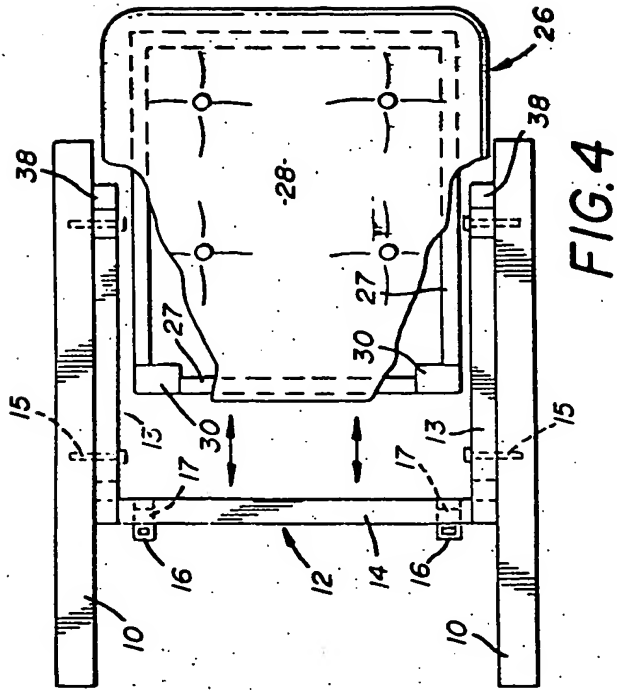


FIG. 2

GB 2 078 504 A





SPECIFICATION

Folding bed chair

5 This invention relates to convertible chairs of the type using the seat and back cushions to form a horizontal bed.

This is a Continuation in Part of Application Serial Number 163321 filed June 26, 1980.

10 Prior art devices have used a number of different ways to position cushions in horizontal alignment to form a bed. See for example U.S. Patents 1,903,918; 2,491,911 and 1,741,192.

15 In U.S. Patent 1,903,918, a chair or settee bed is disclosed wherein a single cushion is shaped to form the seat and back of the device.

In U.S. Patent 2,491,911 a foldable chair is shown wherein the back cushions have legs and unfold to form a horizontal surface in line with a fixed seat cushion.

20 In U.S. Patent 1,741,192 a convertible chair bed combination is shown wherein a rectangular base supports a pair of cushions and has a hinged extensible back that is arranged to support a third cushion.

25 Applicant's device uses a pair of spaced arms held in parallel relation by a horizontally disposed U-shaped frame. The U-shaped frame and the arms define a large open area in which a movable support member is positioned when the device is in a chair configuration.

30 Cushion assemblies hinged to one another with one cushion assembly removably engaged on the base of the U-shaped frame and arranged to be supported on the U-shaped frame and the movable support member in both chair and bed configurations complete the structure.

35 A folding chair bed is easily converted into a bed comprising spaced parallel arms with multiple cushion assemblies attached to one another and the chair. A movable seat support member that can be moved out from between the arms has one of the cushion assemblies attached thereto. A U-shaped support frame provides both parallel spacing for the arms and support for the cushion assemblies and defines the area in which the support member is positioned when the device is in the chair mode.

Figure 1 is a side elevational view of the bed-chair with one of the arms removed;

50 Figure 2 is a vertical section of the bed-chair of Figure 1;

Figure 3 is a side elevational view of the chair with one of the arms removed;

Figure 4 is a top plan view with parts broken away; and

55 Figure 5 is an enlarged detail of a portion of the bed-chair.

60 In the form of the invention chosen for illustration herein, the folding bed chair comprises a pair of spaced arms 10 as seen in Figure 4 of the drawings, each having a pair of feet 11 as seen in Figure 3 of the drawings.

Referring again to Figure 4 of the drawings, a tubu-

lar U-shaped support frame 12 has a pair of horizontally extending tubular members 13 and a connecting tubular member 14 secured there between and forming the base of the U-shaped support frame 12. Each of the members 13 is secured to an arm 10 by a plurality of fasteners 15 which are positioned through apertures in the members 13.

70 As best seen in Figures 1, 2, 3 and 5 of the drawings, a pair of tubular socket members 16 are attached to and extend downwardly from the connecting tubular frame member 14 and are secured thereto as by welding. Support brackets 17 beneath the frame member 14 are also engaged on the socket members 16. The socket members 16 are disposed at an angle from vertical.

80 By referring now to Figures 1 & 2 it will be seen that a pair of back cushion assemblies 18 and 19 are comprised of hardwood frames 20 and 21 having fabric covered foam cushions 22 secured thereto. The back cushion assemblies 18 and 19 are joined together at their adjacent ends by a continuous hinge 23 secured to the hardwood frames 20 and 21.

85 A pair of pins 25 are pivotally secured to the frame 20 of the cushion assembly 18 and adapted to engage the socket members 16 on the connecting frame member 14 of the U-shaped tubular frame 12 so that a detachable connection results.

90 A seat cushion assembly 26 has a hardwood frame 27 to which is secured a foam filled fabric covered cushion 28. The cushion assemblies 19 and 26 are pivotally secured to one another by a hinge 29 that is mounted on a pair of hinge support blocks 30 affixed to the frames 21 and 27 adjacent their respective ends. A movable support member 31 comprises a base 32 having four vertically extending side walls 33 and a number of casters 34 are secured to the base 32. The seat cushion assembly 26 is pivotally secured at one end to said movable support member 31 by a hinge 35. A short arm 36 is pivotally attached to one of the pair of hinge support blocks 30 and arranged to be moved there between to hold the same in spaced relation as seen in Figures 2 and 3 of the drawings. The short arm is used to reposition the cushion assemblies 18 and 19 as shown in Figure 3.

100 Referring now to Figures 1, 2 and 3 of the drawings, it will be seen that in order to open the folding chair to form a bed the user pulls the movable support member 31 outwardly from the area between the arms 10 which action will move the cushion assemblies 26, 18 and 19 forwardly. When the movable support member 31 is fully extended, the cushion assemblies 18 and 19 are horizontally positioned in end to end relation and supported on the U-shaped support frame 12 and the movable support member 31 thereby forming a cushioned horizontal sleeping surface with the cushion assembly 26 as seen in solid lines in Figure 3 of the drawings.

120 In extended or open position one end of the seat cushion assembly 26 can be raised to provide access to the interior of the support member 31. Wedges 37 are positioned on the bottom of the hardwood frame 27 below the forward edge of the cushion assembly

26 so that this edge will be elevated when the movable support member 31 and the cushion assembly 26 are moved into the area between the arms 10 as seen in Figure 1 of the drawings. Secondary blocks 38 are attached to the frame members 13 adjacent their forward ends so that the wedges 37 will engage the same when the cushion assembly 26 is in position thereon as seen in Figure 1 of the drawings, thus holding the assembly in the chair mode.

To return the chair bed to its chair mode or configuration, the forward end of the cushion assembly 26 is lifted, as shown in broken lines in Figure 3 of the drawings and the short arm 36 raised to space the blocks 30, whereupon moving the forward end of the cushion assembly downward will cause the cushion assemblies 18 & 19 to move upwardly as seen in Figure 2, whereupon the support 31 and the cushion assemblies 18, 19 & 26 may be moved to the positions seen in Figure 1 of the drawings.

In the chair mode as in Figure 1 of the drawings the cushion assembly 18 rests against the socket members 16 preventing additional backward movement of the cushion assemblies 18 and 19 and thereby forming a sturdy and resilient back for the chair-bed.

A decorative panel 39 is attached to the forward edge of the hardwood frame 27 of the cushion assembly 26 so as to cover the opening created when the wedges 37 elevate the cushion assembly 26 as shown in Figure 1 of the drawings.

It will thus be seen that a new and useful folding chair-bed has been illustrated and described and that various modifications may be made therein without departing from the spirit of the invention and having thus described my invention what I claim is:

CLAIMS

1. A folding bed chair comprising a pair of horizontally spaced vertically positioned arms having front and back portions, a horizontally positioned U-shaped support frame having a base and extending sections, said sections attached to said arms with said base located inwardly of said back portions of said arms, downwardly extending socket members on said base section, a movable support arranged for movement from a first position between said arms and extending sections of said U-shaped support frame to a second position outwardly of said front portions of said arms, cushion assemblies and hinges securing said cushion assemblies to one another, pins on one of said cushion assemblies removably engaging said socket members, secondary hinges securing said cushion assemblies to said movable support and to said pins, the secondary hinges engaging said pins positioned inwardly of the outermost end of said one of the cushion assemblies whereby movement of the movable support from said first position to said second position locates the cushion assemblies in end to end relation to form a bed and movement of said support member from said second position to said first position moves two of said cushion assemblies into adjacent substantially vertical position engaging said downwardly extending socket members to form the back of said chair.

2. The folding bed chair of Claim 1 wherein the width of the cushion assemblies is such that portions thereof overlie said U-shaped support frame so as to be supported thereby when engaged thereon.

3. The folding bed chair of Claim 1 wherein said downwardly extending socket members are angled forwardly with respect to the base of the U-shaped support frame.

4. The folding bed chair of Claim 1 wherein a short arm is movably attached to one of the cushion assemblies that moves to vertical position to form the back of the chair and the cushion assembly that is hinged to said movable support so as to hold said cushion assemblies in angled relation to one another when said short arm is positioned there between.

5. The folding bed chair of Claim 1 wherein wedges are positioned on the opposite end of the bottom of the cushion assembly with respect to the end thereof hinged to the movable support and arranged to engage the extending sections of the U-shaped support frame and move the cushion assembly upwardly when said movable support is moved to said first position so as to tilt the cushion assembly hinged thereto.

6. The folding bed-chair of Claim 5 and wherein secondary blocks are positioned on said extending sections of said U-shaped support frame for registry with said wedges when said movable support is in said first position so as to prevent relative movement there between.

7. An improvement in a folding bed-chair having spaced arms, a frame joining said arms and defining an area there between open at the front of said bed-chair, a support movable into and out of said area, the improvement comprising a series of three cushions, arranged to form a flat bed when resting on said frame and said support, and to form a chair seat and back when two of said cushions are moved away from said frame to a substantially vertical position, hinges connecting the cushions to one another, secondary hinges or one of said cushions attaching the same to said support, means movable to a position between two of said cushions to temporarily hold the same in angular relation to one another so that movement of one of said cushions toward and away from said support moves the other two cushions toward and away from said frame.

8. A folding bed-chair, arranged, constructed and adapted to operate substantially as hereinbefore described with reference to Figs. 1 to 5 of the accompanying drawings.

Printed for Her Majesty's Stationery Office by The Tweeddale Press Ltd.,
Berwick-upon-Tweed, 1981.
Published at the Patent Office, 25 Southampton Buildings, London, WC2A 1AY,
from which copies may be obtained.